

June 11, 1968

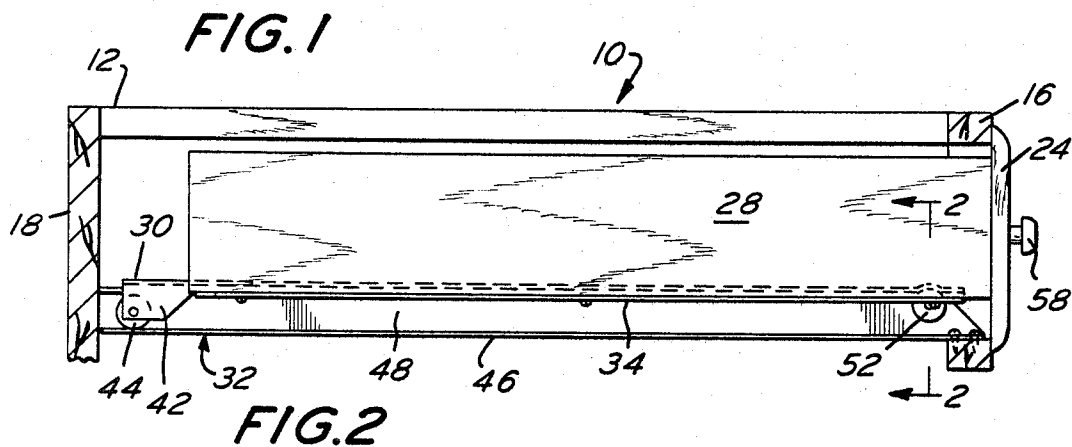
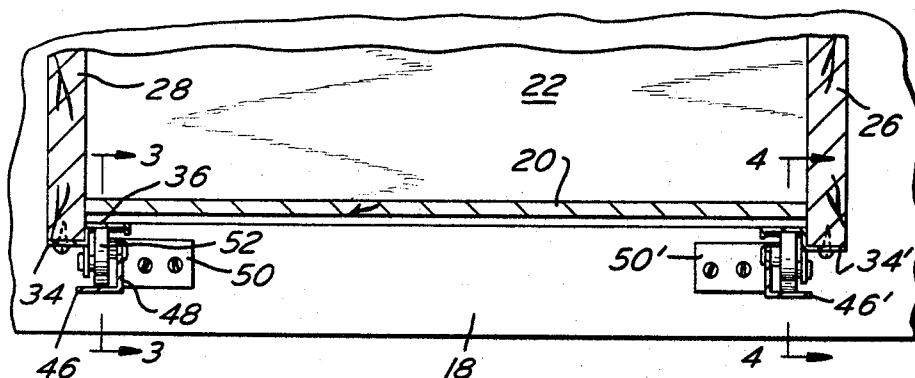
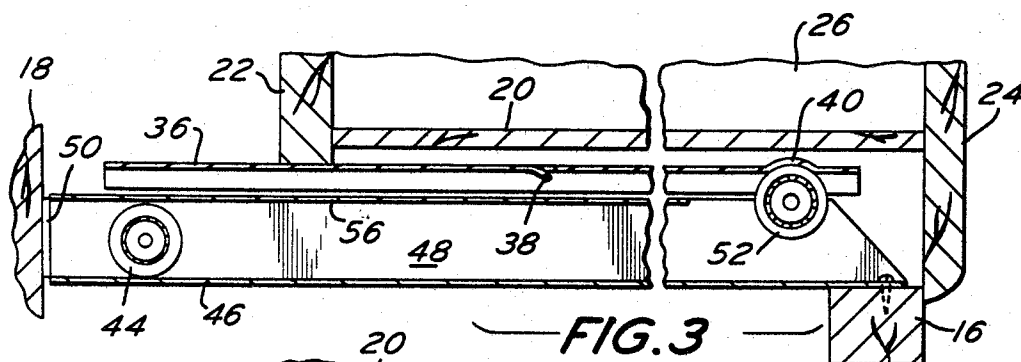
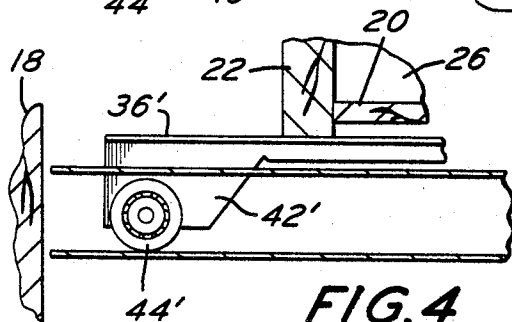
C. G. WALL

3,387,907

DRAWER CONSTRUCTION

Filed Nov. 21, 1966

2 Sheets-Sheet 1



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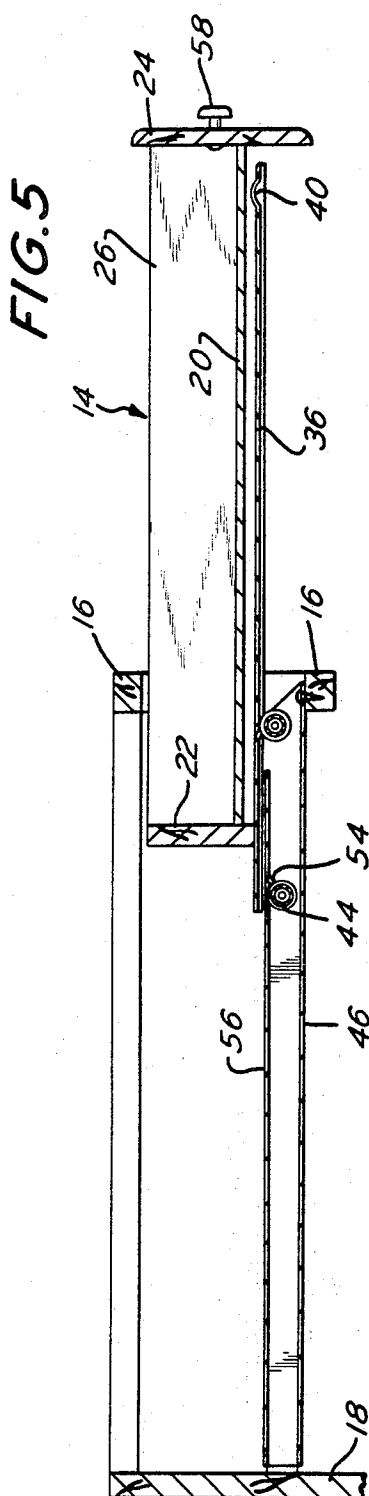
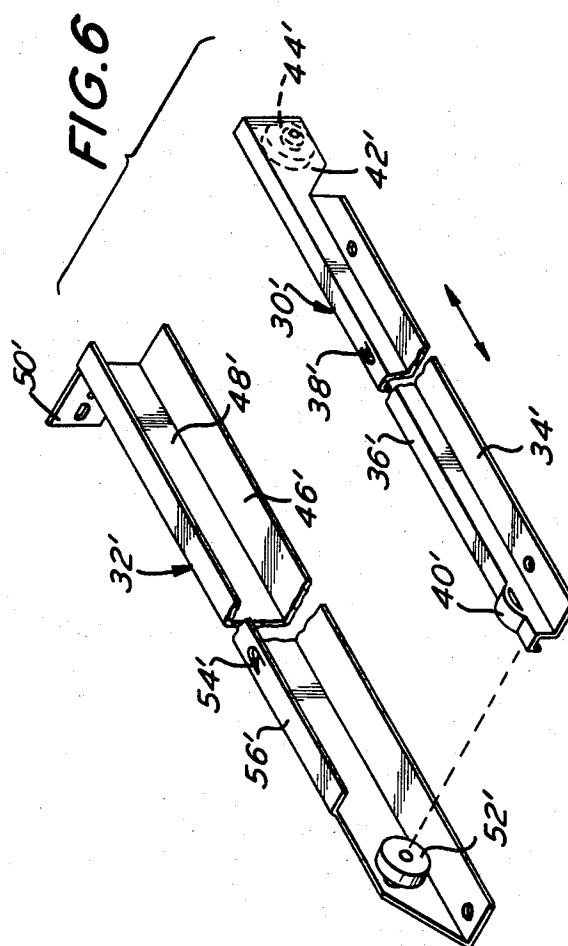
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2 Sheets-Sheet 2



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DRAWER CONSTRUCTION

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Filed Nov. 21, 1966, Ser. No. 595,753

3 Claims. (Cl. 312-348)

ABSTRACT OF THE DISCLOSURE

A slidable drawer is provided with tracks on its bottom surface for cooperation with stationary tracks therebelow. Each track has only one wheel in rolling contact with a mating track. The wheels on the drawer track have rolling contact with upper and lower surfaces on the stationary track depending on the position of the drawer. The drawer tracks have a cavity receiving the wheels on the stationary tracks when the drawer is closed. Partially struck-out portions on the tracks cooperate with the wheels to form limit stops.

This invention relates to drawer construction, and more particularly, to an article such as a piece of furniture having a frame reciprocally supporting a drawer.

The drawer construction of the present invention provides for a drawer reciprocally supported by means of a first pair of tracks on a frame and a second mating pair of tracks on the drawer. A wheel is provided on each track. The wheels on the drawer track are preferably located adjacent the rear of the drawer while the wheels on the frame track are preferably located adjacent the front end of the frame track. Limit stop means are provided on the track to limit the extent to which the drawer may be reciprocated. The wheels on the drawer tracks ride on the frame tracks and vice versa.

It is an object of the present invention to provide a novel drawer construction.

It is another object of the present invention to provide a drawer construction which is simple, inexpensive, reliable and smooth in operation.

It is another object of the present invention to provide a drawer construction which is compact and capable of being located below the drawer.

Other objects will appear hereinafter.

For the purpose of illustrating the invention, there is shown in the drawings a form which is presently preferred; it being understood, however, that this invention is not limited to the precise arrangements and instrumentalities shown.

FIGURE 1 is a side elevation view of the drawer construction of the present invention.

FIGURE 2 is a sectional view taken along the line 2-2 in FIGURE 1.

FIGURE 3 is a sectional view taken along the line 3-3 in FIGURE 2.

FIGURE 4 is a sectional view taken along the line 4-4 in FIGURE 2.

FIGURE 5 is an elevation view similar to FIGURE 1 but illustrating the drawer in its fully opened position.

FIGURE 6 is a perspective view of mating tracks.

Referring to the drawing in detail, wherein like numerals indicate like elements, there is shown in FIGURE 1 apparatus such as an article of furniture designated generally as 10. The article of furniture may be a desk, a bureau, etc. having a frame designated generally as 12.

The frame 12 reciprocally supports the drawer designated generally as 14. The frame 12 has a front panel 16 and a rear panel 18. The drawer 14 has a bottom wall 20, a rear wall 22, a front wall 24, and side walls 26 and 28. It will be noted that the distance between the front and

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rear panels 16 and 18 is greater than the length of the drawer 14.

A pair of first tracks 32 and 32' are supported by the frame 12 and are stationary with respect thereto. A pair of second tracks 30 and 30' are supported by the reciprocally mounted drawer 14 for movement therewith. Track 30 cooperates with track 32 and track 30' cooperates with track 32'. Since the respective mating tracks are identical, only tracks 30 and 32 will be described in detail with corresponding primed numerals being provided on the tracks 30' and 32'.

The track 30 includes offset parallel portions 34 and 36. Track 30 is fixedly connected to the drawer 14 by means of screws or other elements extending through holes in portion 34 and into the side wall 28. It will be noted that portion 36 is spaced from the bottom wall 20 of the drawer 14 as shown more clearly in FIGURES 2, 3 and 5. Portion 36 is provided with a partially struck-out portion 38 which extends generally toward the front wall 24 on the drawer 14. Adjacent the front end of the portion 36, it is provided with a downwardly facing cavity 40.

The rear end of the track 30 is provided with a downwardly extending flange 42 which rotatably supports a wheel 44. The wheel 44 is in rolling engagement with a horizontal flange 46 projecting from the upright wall 48 of the track 32. A rear end portion of the upright wall 48 on the track 32 is bent so as to be at a right angle with respect thereto, thereby forming a mounting bracket 50. The rear end of the track 32 is connected to the frame by means of screws or the like extending through holes in the brackets 50 and into the rear panel 18. The front end of the track 32 is secured to the front panel 16 or a cross brace supported thereby by means of screws or the like extending through holes in the horizontal flange 46.

A wheel 52 is rotatably supported by the upright wall 48 adjacent the front end of the track 32. Wheel 52 is adapted to be in rolling engagement with the portion 36 on track 30. The upright wall 48 is provided with a horizontally disposed flange 56 which overlies the flange 46. Flange 56 is shorter than flange 46 so that wheel 52 may contact portion 36. The flange 56 is provided with a partially struck-out portion 54 which projects generally toward the rear panel 18 as shown more clearly in FIGURE 5.

The front wall of the drawer 14 may be provided with a knob 58 or the like to facilitate reciprocating the drawer with respect to the frame 12 and track 32. When the drawer 14 is in its fully closed position, the front wall 24 thereon overlies the front panel 16 and the wheel 52 is received within the cavity 40. Reception of the wheel 52 within the cavity 40 is a locking feature and desirably prevents the drawer from sliding outwardly if the furniture 10 is tilted slightly forwardly. In addition, the relationship between the wheel 52 and the cavity 40 provides a positive closed position for the drawer whereby when the wheel 52 partially enters the cavity 40, it will of its own volition continue to move to a fully closed position due to the weight of the drawer.

As the drawer is being reciprocated to its fully opened position, wheel 44 is rolling with the upper surface of flange 46 and wheel 52 is in rolling contact with the lower surface of the portion 36. As soon as the drawer has been opened to about the half-way position, wheel 44 loses contact with the flange 46 due to the weight of the drawer and soon thereafter contacts the undersurface of flange 56. As soon as the drawer has reached its fully opened position, portion 38 contacts wheel 52 and portion 54 contacts wheel 44 thereby providing a double limit stop. The drawer 14 may be completely removed from the frame 12 by moving the front end of the drawer upwardly in FIGURE 5 so that wheel 44 clears portion 54 and portion 38

clears wheel 52. Thereafter, the drawer may be completely removed.

Hereinafter, track 32 or track 32' may be referred to as a first track or they may be referred to together as being a pair of first tracks. Hereinafter, track 30 or track 30' may be referred to as a second track or together they may be referred to as a pair of second tracks.

The present invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof and, accordingly, reference should be made to the appended claims, rather than to the foregoing specification as indicating the scope of the invention.

I claim:

1. Apparatus comprising a frame reciprocally supporting a drawer, said drawer being supporting by first and second tracks each disposed below said drawer, said first track being supported by said frame, said second track being supported by the bottom surface of said drawer and overlying said first track, a wheel on each of said tracks, said first track including horizontal flanges spaced apart by a distance greater than the diameter of the wheel on said second track, the wheel on said second track being in rolling engagement with one of said flanges during a portion of the movement of the drawer and with the other flange during another portion of the movement of the drawer, the wheel on said second track being in rolling engagement with said first track, said drawer and said second track being movable with respect to said first track, limit stop means on said tracks to limit the extent of movement of said drawer, and fastening means cooperating with

said drawer and a horizontally disposed portion of said second track for securing said second track to the bottom surface of said drawer, the wheel on said first frame being adjacent one end thereof and the wheel on the second track being adjacent the opposite end of the first frame when the drawer is closed.

2. Apparatus in accordance with claim 1 wherein said horizontal portion of the second track is a flange lying in a horizontal plane parallel to the flanges on said first track and offset with respect to said first track, and said second track having another horizontal portion above the plane of the first portion constituting the part thereof in rolling contact with said wheel on the first track.

3. Apparatus in accordance with claim 1 wherein said limit stop means includes a partially struck-out portion on the second track for cooperation with the wheel on the first track.

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JAMES T. McCALL, *Primary Examiner.*

UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,387,907 Dated June 11, 1968

Inventor(s) Charles G. Wall

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 3, line 15, "supporting" should read -- supported --;
column 3, line 26, "second" should read -- first --; column 3,
line 27, "first" should read -- second --.

Column 4, lines 3 and 5, each occurrence of "frame" should
read -- track --.

SIGNED AND
SEALED
SEP 22 1970

(SEAL)

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